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4. The ancient Egyptians, whose civilization ante-dates that of all other people, and whose country has been justly called "the cradle of the arts and sciences," have the least-sized brain of any Caucasian nation, excepting the Hindoos; for the small number of Semitic heads will hardly permit them to be admitted into the comparison.

5. The Negro brain is nine cubic inches less than the Teutonic, and three cubic inches larger than the ancient Egyptian.

6. The largest brain in the series is that of a Dutch gentleman, and gives 114 cubic inches; the smallest head is an old Peruvian, of 58 cubic inches; and the difference between these two extremes is no less than 56 cubic inches.

7. The brain of the Australian and Hottentot fall far below the Negro, and measures precisely the same as the ancient Peruvian.

8. This extended series of measurements fully confirms the fact stated by me in the Crania Americana, that the various artificial modes of distorting the cranium, occasion no diminution of its internal capacity, and consequently do not affect the size of the brain.

ELECTION.

Francis P. Porcher, M. D. of Charleston, South Carolina, was elected a *Correspondent* of the Academy.

October 2d.

Dr. **Bridges** in the Chair.

Letters were read:

From the Royal Bavarian Academy of Sciences, dated Munich, Feb. 1, 1849, acknowledging the receipt of recent publications of this Society.

From the Secretary of the Lyceum of Natural History of New York, dated September 26th, 1849, acknowledging the receipt of the last number of the Journal of the Academy.

From Mr. A. H. Morse, of New York, dated Sept. 15, 1849, offering for sale a skeleton and skin of Manatus.

From Wm. F. Van Amringe, Esq., addressed to Dr. Morton, dated New York, Sept. 12th, 1849, proposing a new system of Zoological Classification, which was referred to Drs. Wilson, Leidy and Zantzinger.

October 9th.

Dr. **McEuen** in the Chair.

Letters were read:—

From the Secretary of the American Philosophical Society, dated Sept. 24th, 1849, acknowledging the receipt of No. 3, Vol. 1, Journal of the Academy.

From William Hembel, Esq., dated October 4th, 1849, accompanying his donation of 41 vols. of the Transactions of a London Society for the encouragement of arts, manufactures, &c.—received this evening.

Dr. Leidy offered the following observations:

From the opinion so frequently expressed that contagious diseases and some others might have their origin and reproductive character through the agency of cryptogamic spores, which, from their minuteness and lightness, are so easily conveyed from place to place through the atmosphere, by means of the gentlest zephyr, or even the evaporation continually taking place from the earth's surface; and from the numerous facts already presented of the presence of cryptogamic vegetation in many cutaneous diseases and upon other diseased surfaces, I was led to reflect upon the possibility of plants of this description existing in healthy animals, as a natural condition; or, at least, apparently so, as in the case of entozoa. Upon considering that the conditions essential to vegetable growth were the same as those indispensable to animal life, I felt convinced that entophyta would be found in healthy living animals, as well, and probably as frequently, as entozoa. The constant presence of mycodermatoid filaments growing upon the human teeth, the teeth of the ox, sheep, pig, &c., favored this idea, and accordingly I instituted a course of investigations, which led to the discovery of several well characterized forms of vegetable growth, of which at present, I will give but a short description, for the purpose of establishing priority, and propose giving a more detailed account of them, with figures, in the second volume of the Journal.

Enterobrus, a new genus of Confervaceæ.* Simple, attached, isolated filaments, consisting of a long cylindrical cell, (containing protoplasma, granules, and large translucent globules enveloped in a primordial utricle,) with a distinct coriaceous peduncle or stipe of attachment, and at length producing at the free extremity one or two, rarely three, shorter cylindrical cells, (filled with the same matter as the parent cell.)

Enterobrus elegans. Filaments olive brown, brownish, yellowish, or colorless, at first forming a single apical turn, and then passing in a straight or gently curved line to the free extremity. Peduncle, or stipe of attachment, adhering very firmly, coriaceous, uniformly brownish, narrower than the frond cell, papillary, columnar, elongated, conical or pyramidal, expanded at base and at point of attachment to frond cell, marked with longitudinal lines, and frequently with transverse annular constrictions, with no definite interior structure. Length from 1-3750th to 1-400th of an inch; breadth 1-3200th to 1-666th. Frond cell much elongated, frequently reaching the length of 2 or 3 lines, uniformly cylindrical, excepting at free extremity, where it is usually clavate; breadth in full grown individuals pretty uniformly 1-935th of an inch. Contents consisting of a colorless protoplasma, with more or less numerous fine, translucent, yellowish or colorless granules, measuring about 1-15,000th of an inch, and numerous large, colorless, transparent globules or vesicles filled with fluid, averaging the 1-2870th of an inch in diameter. End cells only existing in full grown individuals, one, usually two, rarely three in number; the first one cylindrical, 1-86th of an inch in length by 1-1000th in breadth, filled with more granules and less globules than the parent cell; end cell clavate, 1-135th of an inch long by 1-750th broad, at the clavate end 1-638th, filled with granular matter and a few globules.

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* Εντερον et Βρῦον.

Length of full grown individual 2 to 3 sometimes 4 lines.

Habitat. Grows from the basement membrane of the mucous membrane of the small intestine of Julus marginatus, *Say*, occasionally from the same membrane at the commencement of the large intestine, and also from any part of the exterior surface of Ascaris infecta and Aorurus: entozoa infesting these portions of the intestinal canal of this animal.

The youngest individuals of Enterobrus which I ever detected, measured 1-380th of an inch in length by 1-1060th in breadth, but the most usual sizes vary from the 1-150th of an inch to the full grown individual. At all ages they contain the same character of contents, but in the younger ones, the large globules are usually predominant, sometimes to such an extent as to exclude the other matters. When quite young they are usually more or less clavate and straight, a little more advanced they form a gentle curve, about one-eighth of a circle. A little older, the distal half or third becomes uniformly dilated, and forms an obtuse angle with the other portion; after this as it continues growing, it usually forms a single spiral turn, becomes uniformly dilated, and thus advances to the full grown individual. The cell contents consist principally of large transparent globules with granules and protoplasma in the interstices. Frequently the cells are found distended with the globules to such an extent that the other matters almost, and occasionally even entirely disappear. Iodine turns the protoplasma and granules deep yellow or very deep brown, and causes the rupture of the globules, when a clear fluid is observed to exude; very slightly colored purplish, or undergoing no change of color from the iodine. Solution of iodine, acetic acid, salt water, or the prolonged action of water alone, causes a contraction of the cell contents from the sides of the permanent cell wall, but they are still held together by an apparent delicate membrane of the character of a primordial utricle. Frequently in dead individuals, the interior contents shrink to two-thirds, occasionally to one-third the diameter of the cell calibre, and almost 8 to 20 times the diameter of the cell from each extremity, when they have the appearance of a shrivelled granular membrane. In these latter cases the characteristic globules and granules have disappeared, and their place is more or less occupied with water, and yellowish globular, highly refractive bodies, which resemble oil. These latter globules vary in size from a mere point up to one-fourth the diameter of the cell. The smaller ones are contained within the shrivelled primordial utricle with a few of the larger ones, and a number of the latter occupy a position between the primordial utricle and the cell wall, apparently formed by a conjunction of the smaller globules and an exudation through the primordial utricle during the act of contraction consequent upon decomposition. They are insoluble in alcohol, but are soluble in ether and a solution of potassa; in fact in all their properties they resemble oil. Can these be oil globules, the result of decomposition?

The protoplasma or fluid of the cells is colorless or faintly yellowish, contracts or coagulates upon the application of alcohol, and is colored brown by iodine, having all the characters usually possessed by that albuminoid fluid found in all young vegetable cells and denominated protoplasma by H. von Mohl.

The clear granules are minute, yellowish and resemble fine oil globules. They are turned deep brown by the action of iodine.

The clear globules appear to consist of a delicate vesicular membrane probably derived from the primordial utricle, filled with a colorless fluid.

No circulatory or other movement as in Achyla prolifera, exists in the cell contents. The end cells of the full grown individuals are usually two in number and much shorter than the parent cell. Occasionally I have found three end cells, more frequently but one. These cells are formed from the parent cells, by a contraction first taking place in their contents with the primordial utricle, a partition from the permanent cell wall forming afterwards.

The end cells are probably spore cases; their contents are usually a dense ass of fine granules, similar to those of the parent cell, with a few intermingled globules. I never saw any movement, molecular or other, in the contained matter, except during decomposition.

A question may arise as to the true situation of this plant among the cryptoamia. I have placed it in the order Confervaceæ, from the diagnosis given y Endlicher, in his Genera Plantarum: "Fila capillaria, membranacea v. filamentosa, intus v. extus articulata, simplicia v. ramosa, libera (i. e. haud in frondem coalita,) interdum tamen reticulatim contexta, viridia v. rarius fusca aut purpurea, in formis infimis hyalina, etc."

*Cladophytum,** *a new genus of entophyta allied to the Mycodermata.* Filaments minute, attached by means of a roundish nucleus, simple, or compounded near the base of attachment, with a minute lateral ramuli, inarticulate, and with no evidence of interior structure.

Cladophytum comatum. Filaments delicate, regular, colorless, simple, more frequently branched near the base at very acute angles, growing in more or less dense bunches from a yellowish rounded or oval, attached, nuclear body, varying in size from 1-7500th 1-600th of an inch. Lateral ramuli very minute, measuring in length from 1-15,000th to 1-3000th of an inch, and passing off at cute angles. No indication of articulation or interior structure.

Length from 1-666th to 1-120th of an ineh.

Habitat.—Growing more or less profusely from the mucous membrane of the small intestine of Julus marginatus, occasionally from the same surface at the commencement of the large intestine, from any part of the exterior surface of entozoa infesting those cavities, and also from any part of the surface of Enterobrus elegans.

Arthromitus,† *a second new genus of entophyta, allied to the Mycodermata.*—Filaments always simple, cylindric, articulated, without ramuli, attached by means of a nuclear body, and with no evidence of interior structure.

Anthromitus cristatus. Filaments delicate, straight or inflected, growing in tufts usally of moderate density, from minute, attached, yellowish rounded or oval nuclear bodies. Articuli short, cylindric, uniform, measuring 1-9090th in. in length by 1-15,000th in breadth, with no traces of interior structure.

Length 1-375th to 1-46th of an inch, breadth 1-15,000th in.

Habitat.—Same as Cladophytum comatum, but rarely growing in such dense tufts.

The three genera of entophyta of which I have now spoken, are all so constantly found in the Julus marginatus, that I look upon it as a natural condition, and should I hereafter meet with an individual without them, I will consider it a rare exception, because, in one hundred and sixteen individuals which I have examined during the past thirteen months, in all seasons, and at all ages and sizes of from one up to three inches of the animal, I have invariably found them. It cannot be supposed that these are developed and grow after death, because I found them always immediately upon killing the animal. Whilst the legs of fragments of the animals were yet moving upon my table, or one half the body even walking, I have frequently been examining the plants growing upon part of the intestinal canal of the same individual. And upon the entozoa, these entophyta will be frequently found growing, whilst the former are actively moving about. I found among an ascaris three lines long, which had no less than than twenty-three individuals of Enterobrus averaging a line in length, besides a quantity of the other two genera growing upon it, and yet it moved about in so lively a manner that it did not appear the least incommoded by its load of vegetation. This specimen I have preserved in a glass cell in Goadby's solution, and exhibit it to the Academy.

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*Κλαδος et φυτον.

†Αϱθϱου et μιτος.

The animals were uniformly enjoying good health, i. e. all the organic and animal functions were natural; they eat, grew, reached their definite size, reproduced, and in fact, presented all those actions characteristic of the normal state of existence of the animal.

The genus Julus is an extensive one, and its species are found in all the great parts of the globe, and as their habits are the same, the conditions for the production of the entophyta will be the same, and I think I do not go too far when I say they will be constantly found throughout the genus in any part of the world, so that naturalists and others may, upon examination, readily verify or contradict the statements which I have this evening presented.

From these facts we perceive that we may have entophyta in luxurious growth within living animals, without affecting their health, which is further supported by my having detected mycodermatoid filaments in the cœcum of six young and healthy rats, examined immediately after death, although they existed in no other part of the body. These filaments were minute, simple, and inarticulate, measuring from 1-5000th to 1-1428th in. in length, by 1-16-000th of an inch in breadth. With them were also found two species of Vibrio.

Even those moving filamentary bodies belonging to the genus Vibrio, I am inclined to think, are of the character of algous vegetation. Their movement is no objection to this opinion, for much higher confervæ, as the Oscillatorias, are endowed with inherent power of movement, not very unlike that of the Vibrio, and indeed the movement of the latter appears to belong only to one stage of its existence. Thus, in the toad, (Bufo americanus,) in the stomach and small intestine, there exist simple, delicate, filamentary bodies, which are of three different kinds. One is exceedingly minute, forms a single spiral, is endowed with a power of rapid movement, and appears to be the Spirillum undula of of Ehrenberg; the second is an exceedingly minute, straight and short filament, with a movement actively molecular in character, and is probably the Vibrio lineola of the same author; the third consists of straight, motionless filaments, measuring 1-1125th in. long, by 1-15,000th broad; some were, however, twice, or even thrice this length, but then I could always detect one or two articulations, and these, in all their characters, excepting want of movement, resemble the Vibrio. In the rectum of the same animal, the same filamentary bodies are found, with myriads of Bodo intestinalis; but the third species, or longest of the filamentary bodies, have increased immensely in numbers, and now possess the movement peculiar to the Vibrio lineola, which, however, does not appear to be voluntary, but reactionary; they bend and pursue a straight course, until they meet with some obstacle, when they instantly move in the opposite direction, either extremity forward.

But it must not be understood that these facts militate against the hypothesis of the production of contagious diseases through the agency of cryptogamia. It is as well established that there are microscopic cryptogamia capable of producing and transmitting disease, as in the case of the Muscardine, &c., as that there are innocuous and poisonous fungi. But to suppose that they are the sole cause of contagious disease, is to doubt the possibility of other causes, such as a change in the chemical constitution of the atmosphere, the elements of our food, &c., and is as ridiculous as the psoric origin of most diseases of that miserable charlatanry denominated homœopathy. In many instances it is difficult to distinguish their character, whether as cause or effect, as upon diseased surfaces, in Tinea capitis, apthous ulcers, &c. In a post-mortem examination, in which I assisted Dr. Horner, a few weeks since, 28 hours after death, in moderately cool weather, we found the stomach in a much softened condition. In the mucus of the stomach, I detected myriads of mycodermatoid filaments, resembling those growing upon the teeth; simple, floating, inarticulate, and measuring from 1-7000th to 1-520th of an inch in length, by 1-25,000th of an inch in breadth. It is possible they may have been the cause of the softened condition; but I would prefer thinking that swallowed mycodermatoid filaments from the teeth, finding an excellent nidus in the softening stomach, rapidly grew and reproduced themselves. In the healthy human stomach these do not exist.

In the stomach of a diabetic patient, I found so very few that they probably did not grow there, but were swallowed in the saliva.

Dr. Leidy, after exhibiting numerous drawings of the entophyta described by him, and also specimens, beneath the microscope, growing from the mucous membrane of the small intestine of Julus, and from the exterior surface of entozoa infesting that cavity, proceeded to exhibit and describe some new genera and species of entozoa, as follows:

1. *Ascaris cylindrica.* Body nearly cylindrical throughout, anteriorly moderately attenuated: tail curved, 1-214th of an inch in length from the anus, œsophagus elongated, gibbous in the middle, with the œsophageal bulb and pharynx 1-100th of an inch in length; œsophageal bulb pyriform, 1-75th of an inch in diameter; ventricle or intestine somewhat tortuous, cylindrical, dilated at both extremities; rectum pyriform; female generative aperture about half way between the mouth and tail. Whole length 4-5th of a line, breadth 1-12th of a line.

Habitat.—Small intestine of Helix alternata.

Remarks.—I found the female only of this species in fifteen out of forty specimens of Helix alternata, in numbers of from one to three. The ovaries in all were distended with ova, the latter measuring 1-430th of an inch in length by 1-576th in breadth.

2. *Ascaris infecta. Female*, subcylindrical gradually diminishing towards the extremities, white, with a brown streak down the lower two-thirds of the middle line; anteriorly obtusely rounded; tail slightly curved, 1-80th of an inch long from the anus. The three papillæ of the mouth projecting; œsophagus strongly

muscular, thick, oblong, pyriform, 1-80th of an inch long, greatest breadth 1-175th of an inch; œsophageal bulb, cordiform, 1-166th of an inch long, by 1-66th of an inch broad; ventricle slightly dilated at commencement, contracted posteriorly; generative orifice projecting, just below the middle of the body. Vagina furnished with a large ovate seminal receptacle.

Male, dilated at both extremities; tail thick, 1-174th of an inch long, furnished upon its inner aspect with two minute tubercles. Above the anus are two rows, each of four tubercles, connected by delicate folds of integument. Œsophagus 1-111th of an inch long, by 1-260th of an inch broad; œsophageal bulb depressed cordiform 1-214th of an inch long, by 1-250th of an inch broad. Penis formed of two curved spiculæ, measuring in length, in a straight line, 1-78th of an inch.

Length of adult female, 3 to 4½ lines; breadth at origin of ventriculus 1-123d of an inch; middle of body 1-83d to 1-60th of an inch; just above anus 1-144th of an inch. Ova 1-319th of an inch long, by 1-428th inch broad.

Length of male 2 lines; breadth at origin of ventriculus 1-176th of an inch; middle of body 1-211th of an inch; just above anus 1-202d of an inch Spermatophori oval, 1-1391 inch long, by 4-1666th inch broad, with spermatozoa 1-3750th inch long, by 1-10,000th inch broad.

Habitat.—This species is found in numbers of from three up to fifty or more, of various ages and sizes, pretty constantly in the small intestine of Julus marginatus, Say. The males are found in the proportion of about one in eight.

Aorurus,[*] *a new genus of Nematoideæ.* Body cylindrical, strongly annulated, with a tail nearly as long as the body, straight, or nearly so, inflexible, spiculate, ensiform, shining, and pointed. Mouth unarmed. Female generative aperture near the middle of the body.

Remarks.—This genus is divisible, by several well marked characters, into two distinct sub-genera.

1st sub genus. Streptostoma.[†]—Body cylindrical, very strongly marked with broad annuli. Mouth moderately large, round, bordered by a collar, (formed by the second annulus projecting beyond the general outline of the body.) Œsophagus divided into two distinct pyriform muscular bulbs, with a small intermediate rounded bulb. Tail four-fifths the length of the body.

Streptostoma agile. Female.—Body larva-form, cylindrical, narrowed anteriorly and posteriorly, opalescent white, divided into from sixty-one to eighty-eight broad annulations, of which there are twenty-one from the mouth to the commencement of the ventriculus. Tail very straight, occasionally slightly sigmoid, or bent at the point, narrow and sharply pointed, inflexible and brittle. Mouth moderately large, round, projecting; pharynx almost null; œsophagus consisting of three bulbs; the first elongated pyriform, strongly muscular, measuring 1-197th in. long, by 1-319th in. broad; second bulb small, rounded, muscular, 1-882d in. long, by 1-882d in. broad; third, or true œsophageal bulb, pyriform, 1-294th in. long, by 1-312th in. broad. Ventriculus dilated at commencement to nearly the diameter of the body, afterwards straight and cylindrical to near its termination, where it is slightly dilated. Rectum elongate, pyriform. Generative aperture situated about twenty-four rings above the anal aperture, which latter is placed between the last two annuli of the body. Ovary double; ova 1-333d in. long, by 1-400th in. broad.

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[*] Αορ et ουρα.

[†] Στρεπτὸς et στομα.

Length of body from 1-13 to 1-11th inch; breadth at commencement of ventriculus 1-118th inch; at middle of body 1-97th inch. Tail from 1-16 to 1-15th inch long, by 1-888th in. broad at its middle.

*2nd sub-genus.—Thelastoma.**

Body cylindrical, attenuated anteriorly, strongly marked with moderately broad annuli. Mouth small, opening at the extremity of a small papilla. Œsophagus divided into two distinct portions, the first long and cylindrical, the second constituting the true œsophageal bulb. Tail more than half the length of the body.

Thelastoma attenuatum.—Female. Body attenuated anteriorly to commencement of the ventriculus, opalescent white, divided into from 140 to 160 annulations, of which there are from fifty-two to fifty-seven from the mouth to the commencement of the ventriculus. Tail very straight, or very lightly curved or bent, slender, inflexible and brittle, and sharply pointed. Mouth always projected, small, surmounting a small papillary elevation formed by the first annulus of the body. Pharynx very short and narrow; œsophagus strongly muscular, cylindrical, 1-47th in. long, by1-533d in. broad; œsophageal bulb pyriform, 1-178th in. long, 1-222d in. broad. Ventriculus dilated alæform at commencement, cylindrical throughout. Rectum short, pyriform. Generative aperture 42 annulations above the anal. Ovary double, ova 1.333d in. long, by 1.400th in. broad.

Length of body from 1-10th to 1-8th in.; breadth at middle 1-95th in. Tail 1-15th in. long, by 1-111th in. broad at middle.

Habitat. and Remarks.—Streptostoma agile and Thelastoma attenuatum are found together principally in the commencement of the large intestine of Julus marginatus, in numbers of from one to fifteen, and less frequently in the small intestine with Ascaris infecta, in numbers of from one to six. It is remarkable, that although I have found from one to fifteen of these two genera, in nine-tenths of the animals examined, I have never yet been able to detect a single male.

Thelastoma always has the mouth projected, whilst Streptostoma has it retracted, producing, in some measure, but by no means wholly, the difference in size of the oral aperture.

At first I was inclined to think these two animals were different stages of the same species, but the adults uniformly correspond to the descriptions given, and in all cases contained more or less perfected ova.

Their movements are active, wriggling the body in a sigmoid manner and vibrating the delicate spiculated tail, which in sun-light resembles a shining acicular crystal.

Thelastoma, from its form of œsophagus and narrower annulations and shorter tail than Streptostoma, occupies a position between the latter and Oxyuris.

Gregarina Dufour.

Body consisting of two distinct cells. Inferior cell the larger, marked

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Θηλή et στομα.

with delicate, parallel, longitudinal lines, (muscular ?) and filled with a fine granular matter, obscuring one or two nucleolo-nucleated-organic cells. Superior cell placed in a depression of the inferior, surmounted by a slight papilla in which may be detected two lines, apparently outlines, of an oral cana to the interior of the cell which is filled with granular matter ; cell wall amorphous and transparent.

Gregarina larvata. Body opaque white, cylindrical or fusiform, frequently considerably dilated at the middle of the upper third. Superior cell a flattened or depressed sphere, received about one-half into a depression of the inferior cell, surmounted by a papillary elevation with traces of a communication with the exterior; interior filled with a finely granular mass resembling oil globules, and measuring from 1-15,000th to 1-7,500th in. Length of cell, in smallest individuals 1-123d in. ; in largest 1-80th by 1-61st in. broad. Inferior cell elongated, cylindrical or fusiform, not communicating with the exterior nor with the interior of the superior cell ; filled with a mass of granules resembling that of the superior cell, rendering the larger individuals opaque, but translucent in the smaller ones, and usually obscuring one or two comparatively large nucleolo-nucleated-organic cells, measuring from 1-888th to 1-308th in. in diameter. Cell-wall marked with exceedingly regular, delicate, longitudinal, parallel lines about 1-9375th in. apart, apparently muscular in character.

Length from 1-160th to 1-30th in., by 1-830th to 1-111th in. in breadth.

Habitat.—Found in numbers of from half a dozen to over a hundred, in the ventriculus of Julus marginatus.

Gregarina is probably the larva condition of some more perfect animal, but in the 116 individuals of Julus which I have examined, I have not been able to detect any form which could be derivable from it. Creplin doubts its animality.* When I first discovered this body, thinking it to be a larva, I did not examine it carefully, and it was not until some time afterward when, being desirous of ascertaining its true nature, upon examining some fresh specimens beneath the microscope, I detected movements of an animal character, and this led me to seek for muscular structure, which resulted in the discovery of the longitudinal lines of the inferior cell. These escaped the observations of Siebold, for he says, "Nach meine Beobachtungen bestehen die Gregarinen aus einer harten glatten den Eihüllen der Insekten-Eir ähnlichen Haut."† The movements of the animal are exceedingly sluggish, and consist of a very slow bending in any direction of any part of the inferior cell, most usually above the middle, rarely at the inferior extremity, but most frequently near the superior cell which is entirely passive. The superior cell is also frequently drawn or contracted within the inferior, and again protruded by the contraction of the latter, and the propulsion of the granular contents against it. The inferior cell is also frequently, more especially in younger individuals, intussuscepted within itself through a partial contraction ; and again relieved by a general contraction of the cell.wall.

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*Nachträge zu Gurlt's Verzeichness der Thiere bei welchen Entozoen gefunden worden sind. Wiegmann's Archiv, 1846, 1 Band, S. 157.

†Wiegman's Archiv, 1838, 2 Band, S. 308.

In the state in which Gregarina is found, it would probably hold a rank between the Trematoda and Trichina the lowest of the Nematoidea.

*Nyctotherus,** *a new genus of Polygastrica, allied to Plesconia.*—Body ovate, dilated posteriorly, compressed anteriorly, granulated, longitudinally lined, with an apparent operculum covering its anterior half, and having a semi-circle of cilia just within its margin inferiorly and posteriorly. Centre of the operculated portion furnished with a large trapezoidal finely granular areola. Posterior part of the body with a short fissure passing inwards and downwards.

Nyctotherus velox.—Body white, ovate, conoidal, anterior margin rounded, obtuse; posteriorly acute. Posterior margin of the apparent operculum passing in a curved line upwards upon the middle of the body to within a short distance of the back, and furnished inferiorly with a point projecting backwards. With a line passing down from the back about the middle of the operculum of the trapezoidal areola, giving the part of the body anterior to this the appearance of a head. Trapezoidal areola, with curved sides, finely granular. Posterior fissure communicating with the exterior, just above the acute termination of the body, and passing inwards and downwards, resembles an anal aperture. Areolæ of the interior sarcous mass generally minute, one large and round pretty constantly to be observed at the inner termination of the posterior fissure.

Length from 1-254th to 1-80th in.; breadth from 1-320th to 1-254th in.

Habitat.—Commencement of the large intestine of Julus marginatus, often found in considerable numbers.

Remarks.—This genus is closely allied to Plesconia, but possess no appendages excepting the semi-circle of cilia, just within the edge of the apparent operculum.

The animal swims in water with great ease and grace. After being in this fluid some time, the external investment bursts, and allows the protrusion of globular masses of sarcous matter, as in Leucophrys, but not to such a great extent.

NOTE.—Since the above went to press, Dr. Leidy announced to the Academy that he had discovered two new species of the entophyte Enterobrus; one of them E. spiralis, 1-69th inch long, growing in the small intestine of Julus pusillus; the other, E. attenuatus, 1-24th inch long, growing more or less profusely with a second species of Cladophytum, C. clavatum, in the ventriculus of a coleopterous insect, Passalus cornutus. Thus has been established the law "that plants may grow in the interior of the healthy animal as a normal condition," and a new field has been presented for the investigation of the Cryptogamo-naturalist. [See forthcoming number of the Proceedings.]

October 16*th.*

MR. PEARSALL in the Chair.

Mr. Cassin read a paper describing some new species of Birds, of the family of Caprimulgidæ, specimens of which are in the collection

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*Νυκτοθηρας.